CULTIVATED CITIES: BOVINE ECOLOGIES, MOBILITIES, AND SPATIAL POLITICS IN URBAN INDIA

THESIS SYNOPSIS

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Shruti Ragavan

Reg. No.: 20319010047

Place: Bengaluru

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Supervisor: Anindya Sinha, National Institute of Advanced Studies

Co-Supervisor: Maan Barua, University of Cambridge

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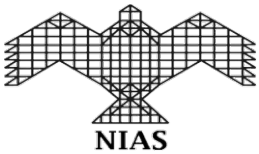

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SYNOPSIS

Introduction

Attending to entangled enactments in the urban landscape, Cultivated Ecologies explores the implications for how urban space, relations, and bodies are conceived and conceptualised vis-à-vis animal husbandry, dairy farming practices, and bovine (im)mobilities in urban India. Taking the idea of the 'whole' and 'part' animal, Cultivated Ecologies generates distinct articulations of reconfiguring the urban question drawn from the material-semiotic enmeshments of the bovine entity in the city. Occurring across conceptual registers of the archival, the ethnographic, the sensorial, and the comparative—that interweave to formulate the theoretical and methodological framework of Cultivated Ecologies—this framework enables the urban to be read, grasped, and narrativized from a more-than-human perspective, articulating an urban otherwise (Bunnell, 2019; Bathla, 2024).

Constituted by variegated entities and modalities of living—who/which are typically excluded and invisibilised in mainstream discourses and visions of the urban, the urban otherwise in this thesis is foregrounded by the quadrupled movements and rhythms of bovines in urban India. In perpetually treading the contours of settled-unsettled, mobile-immobile, legal-illegal, formal-informal, included-excluded, human-nonhuman, and the urban-agrarian, bovines weave together a distinct iteration of the urban. Bringing into play the idea of the cultivated, this thesis argues against the urban being a mere placeholder for nonhuman life, and instead postulates the urban fabric to be composed by, forged and co-constructed with other-than-human life. Thus, derived from a set of micro and macro impulses, intensities, interactions, and counterpoints by more-than-human collectives and networks, Cultivated Ecologies takes manifold forms in the city.

At the metabolic level, it brings to the fore the bodily work bovines do converting fodder, food waste, and other waste back into the value chain. It also makes visible the disproportionate rendering of toxic harm onto 'disposable' bodies—both human and other-than-human—within 'eviscerating urbanisms' in metropolitan India, enforcing some to inhabit, work with, and survive off urban detritus, making them metabolically vulnerable. At the individual level, the framework foregrounds bovine (im)mobilities and rhythms in forging the urban landscape. It attends to how bovines inhabit the city, its infrastructures and material environments, creating relations with humans and other-than-humans, thus crafting a dwelt environment and commoning the city in their mobilities or tethered state. At the level of the community, Cultivated Ecologies engages with small- to medium- scale urban dairies critical

to the informal supply of milk to the city and its inhabitants. It pays attention to vernacular practices of dairy farming, migratory histories, gendered labour relations, care practices, and changes in rearing and herding practices amidst an urbanising landscape. The framework is able to discern the nature of relations within the surrounding environs, reflecting on the one hand on the formation of a 'commoning-community' through everyday shared practices, on discrepancies in mobilities striated along gender, caste, religion, and class lines, as well as on the other of rising contestations and forms of bordering the urban by middle-class residents.

At the structural level, Cultivated Ecologies discerns the role of state and municipal bodies in ordering and bordering bovine lives, dairy farming practices, and meat production and consumption in the city, whilst simultaneously partaking in ways to improve bovine breeds, increase milk supply as well as (cara)beef exports. Additionally, it sheds light on the impingement of majoritarian beliefs and notions into beef-eating cultures and food practices and their implications particularly for butcher communities and meat shops. The role of religion and caste is foregrounded in delineating a politics of inhabitance. In connection, at the spatial level, the framework brings to the fore urban planning regimes which specifies the place of things, entities, beings, practices in the city based on questions of belonging, their character, and urban imaginaries. From the seizing of stray cattle, to the creation of animal spaces such as cattle pounds and gaushalas, measures to maintain hygiene standards in cities, and spatial separation based on sensory politics are some spatial practices that are made prominent by this framework. Finally, at the urban level, Cultivated Ecologies delineates how embroiled the urban landscape is in practices of non-urban, rural and/or agrarian relations. It takes seriously agrarian practices and other-than-human intensities, arguing for renewed urban imaginaries that recognises the above ways of knowing and dwelling as a mode of urban belonging and inhabitance. It also sheds light on urban peripheries and extensions as critical conduits for examining more-than-human relations and geographies. Together, these varied forms and scales of Cultivated Ecologies compose the Cultivated City.

Below, I provide a brief summary of the thesis chapters and how they address research questions raised in the thesis, as reiterated below:

1. Who is an urban animal? How is it entangled as 'whole' and 'parts' both historically and in the contemporary urban landscape?
2. What are the vernacular ecologies in relation to the cultivated animal in the everyday urban landscape?
3. How does an urban animal inhabit the city, with and against the grain of urban planning and design? What do we derive about the spatial politics of

the city?

4. How can we rethink the urban? What might an engagement with more-than-human and cultivated ecologies therein do for rethinking urban theory?

The Cultivated City

Significant to everyday urbanisms in South Asia are livelihood practices and relations that are agrarian in nature including agriculture, urban farming and gardening, animal husbandry, dairying, poultry farming, fishery, pottery, leather tanning, amongst others. As traditional sources of income and livelihoods amongst marginalised and subaltern communities, these communities are a significant component of the urban majority in India. Nevertheless, amidst capitalist urbanisation processes in metropolitan cities where notions of the urban modern, 'bourgeois environmentalism,' and a 'rule by aesthetics' operates, where urban planning imaginaries, and the logic of sanitation and hygiene dictates who or what constitutes the urban—urban inhabitance becomes a political question, one fraught with contestations.

Categorised as 'non-urban,' 'rural,' or 'agrarian' in nature, the above practices are either expelled from the urban form or subjugated to repetitive attempts at assimilation or transformation, or to events of dispossession, causing a state of perpetual precarity. However, as critical vectors in the informal production and supply of food produce such as grains, vegetables, milk, meat, fish, and poultry amongst others to the city and her inhabitants, such practices continue to persist in the urban form by constantly navigating and negotiating with the state and municipality. In this light, as a country deeply embedded in agrarian relations both historically and in the contemporary scenario, the thesis postulates the critical need to reconfigure the urban question by examining bovine ecologies in urban India.

Situated at the intersection of southern urbanisms and more-than-human geographies, Chapter 2 titled, 'Bovines at the Intersection of Southern Urban Theory and More-than-human Geographies: Towards a Cultivated Ecologies of Cities' provides an extant review of literature arguing for the need to examine how urbanicity is embroiled in non-urban processes and relations, and is also produced beyond humanistic tendencies. In the case of the former, the thesis draws from South Asian urbanisms, which in stark contrast to the Lefebvrian and neo-Lefebvrian thesis on planetary urbanisation (see Brenner & Schmid, 2015), postulates that in cities of the south, and more so in countries with an agrarian history, the urban is an agrarian question (Gururani & Dasgupta, 2018). Constitutive of both urban and agrarian processes and

relations that "stretch, twist, and bend into one another" (Barua, 2023, p. 195) the urban fabric in such contexts is comprehended as 'agrarian urbanisms.'

Moreover, agrarian relations as we know are entangled with other-than-human life, their labour, and produce, constituting a significant part of our socio-environments. Drawing from posthumanism and more so the more-than-human framework, the thesis extends agrarian urbanisms to encompass other-than-humans as well, as beings who not only inhabit our urban environments, but shape them through their mobilities, rhythms, and proclivities. Here, how the bovine and the cow traverses the urban and the agrarian is examined by looking into the historical construction of the symbol of the cow in India, and how contemporary social sciences scholarship engages with this discourse. In a similar vein, the thesis pushes southern and postcolonial urban theory—which reproduces certain anthropocentric tropes of European theory by considering only humans as subjects that matter—to look beyond humans.

Furthermore, since the canon of (southern) urban theory has primarily emerged from metropolitan centres and capital cities, this thesis pushes this discourse to look beyond urban centres as sites of knowledge production discourse. This analysis is made rigorous by the adoption of a comparative framework which brings two urban landscapes into dialogue with each other. On the one hand is the colonial and postcolonial spectacular capital city of Delhi, and on the other is the peripheral, overlooked and yet premiere city of Guwahati, postulating that there are 'souths' even within southern urbanisms i.e., "a 'south within the south'" (Chowdhury et al., 2024). In so doing, the chapter places significance on the need to examine 'other Souths,' 'other lifeforms' as well as 'other urbanisms' in order to provincialise the south, thus, pushing the discourse towards an "engaged pluralism" (Barnes & Sheppard, 2010; Brenner, 2018). This chapter, therein, provides a theoretical backing to the first and fourth research question of the thesis.

Moving away from the prevailing academic discourse on bovines in contemporary India located within the larger ambit of cow protectionism, this thesis examines the everydayness of the bovine being as deeply enmeshed in relations across the sacred and the profane. Inspired by recent work across animal geographies, critical animal studies, and more-than-human geography on bovines in India along the lines of 'urban walkers' and 'mobilities and waste,' Chapter 3, titled, 'Hoofprints in the City: Method, Praxis, Reflections' illustrates how to methodologically unearth the underlying urbanism prevalent in the everyday by adopting the metaphor of urban footprints or hoofprints, as proposed by Amin & Thrift (2002).

Drawing from two critical shifts in mobility studies and animal geographies i.e. from movement to mobility (Cresswell, 2006) and from animal mobility to animals' mobilities

(Hodgetts & J. Lorimer, 2018) respectively, the thesis uses the idea of 'Trac(k)ing Methodologies' across the whole and part animal as a way to capture everyday mobilities from a more-than-human lens. Categorised into three mobilities (see Table 2), namely governance and spatial (b)ordering, entanglement, and bovines' mobilities, the research follows a more-than-human framework rather than a multispecies one, since the focus is not only of or between species, but rather takes the urban to be a more-than-human assemblage.

Besides archival research and ethnography with human participants, the bovine follows conducted to capture bovines' mobilities in the urban form required the configuration of a multitude or an 'assemblage' of methods, tools, devices, and beings—one designed based on the situational context. In relation to a part of the third research question, on how urban animals inhabit the city, namely with and against the grain of urban planning and design — 'bovine ethnographies' – a 'go-along' method was formulated. was formulated. Comprising a hybrid of ethnography, ethology, geography, and visual/digital methods, bovine ethnographies captured the embodied experience of bovines themselves. The narratives and materials generated from this research were analysed using the method of thematic analysis along with an 'iterative-inductive' approach that allowed flexibility in making inferences and noticing emerging themes during the course of the research, rather than only after the completion of fieldwork—making this a generative and constructive endeavour.

Following this, from Chapter 4 to Chapter 6, I present my empirical findings. Chapter 4, titled, 'Bovines in the Archive: A More-than-human History of Improvement' addresses how the urban animal is entangled as whole and parts historically. By exploring the material-semiotic traces and tracks of bovine entities in the archive, this chapter produces a more-than-human history of improvement in Delhi and Guwahati. It elucidates how the colonial logic of improvement extended beyond the human—beyond matters of land, health, disease, housing, infrastructure, and taming environments—to other-than-human lives, bodies, and ecologies. Significant for agricultural and animal husbandry purposes across agrarian and urban landscapes, bovine improvement across the 'whole' and 'part' animal took differing forms based on the local conditions in the Indian landscape.

It proposes that a lively reading of the archive has the potential to produce more-than-human histories of cities encompassing a retinue of entities, knowledges, and infrastructures—such as state actors; an understanding of bovine breeds, biology, and ethology; histories and practices of rearing communities; governing materials and infrastructures; juridical measures; local topography and climatic conditions; non-state actors such as cow protectionists and the urban elite. Together, this culminates in an alternative mode of reading, writing, and perceiving

the urban; unearthing suppressed knowledges of our urban landscapes, thus, becoming a genealogy of the city.

Coming to the contemporary city, where capitalist urbanisation processes and the ensuing changes in land relations have led to the usurpation, enclosure, and transformation of land into property, the following two chapters on differing renditions on the urban commons in Delhi and Guwahati, form the ethnographic core of the thesis. Corresponding with three research questions, these chapters address the contemporary component of the first three research questions.

Derived from bovine (im)mobilities and inhabitance, the more-than-human commons derived in this chapter delineate how a (new) urban commons is composed through the proclivities and tendencies of other-than-humans. Such an active quality to the nature of the contemporary urban commons, not only calls for its comprehension as a lively, performative, and shared practice, but therein also demands a shift in understanding from the commons to commoning. Encompassing the continuous making and remaking of the commons, more-than-human commoning emerges as bovines create and chart a rout(in)e for themselves, based on spaces, infrastructures, and relations with humans and nonhuman others, they come to associate with food, rest, care, and shelter. From resting atop footpaths and traffic signal islands, to foraging on roadside garbage dumps and open college grounds, to being provisioned outside certain homes—the commons that are cultivated in the urban have a 'phantom-like' quality to them—indicative of new spaces of dwelling on the one hand, they also "serve as a reminder for what lay earlier and was enclosed" (Ragavan & Srivastava, 2020).

In Chapter 5, titled 'Moments of the Common: Bovine Mobilities in Everyday Delhi,' we observe a temporal quality to the nature of the commons—of the past, the disappearing, and the contemporary—as three 'moments' of the common, signalling enclosure, conversion, and emergence respectively. With urban dairies situated in urban villages of Delhi that are themselves of a mixed, contested, and ambiguous nature crosscutting the urban and the agrarian/pastoral, the more-than-human commons too emerge within urban cracks and interstices of the city's mosaic. As a result, bovine mobilities intermesh with other mobilities in the urban form, making urban commoning a messy, complex, and at times contested endeavour. Additionally, since one commons more often than not comes in the way of another (Harvey, 2011), the act of commoning, uncommoning, and recommoning i.e., the 'portable' nature of commoning (Narayan, 2023) is typically enforced upon marginalised groups in the city – human and other-than-human – to make way for other public spaces, infrastructural projects, development activities, or as private property. Such enmeshments not only lend

further to the discourse on agrarian urbanisms in South Asia, but the urban commons delineated in this chapter also underscore how even when composed by other-than-humans, the commons tend to be striated along gender, religion, caste, and class lines.

Chapter 6, titled, 'The Commons Multiple: From the urban extensions of Guwahati' explores how the urban commons are emblematic of a spatial dimension to its materialisation. Located along the fluid edges of the city—stretching into the neighbouring state, into hills, into wetlands, onto an island in the river, across the river, or conceived as satellite towns from the time of inception—are the multifarious nature of urban extensions in Guwahati, amidst which we find a range of bovine ecologies and commoning practices. Here, the more-than-human presses us to look at the commons: public space, ecological, toxic-metabolic—as encompassing a multitude of processes (commoning, decommoning, recommoning), a varied suite of entities (cattle rearers, dairy farmers, cattle, storks, waste workers), interactions (grazing, rearing, segregating) and threaded by distinct attributes (affordances, contestations, de- and recommoning, assemblage, and waste)—thereby constituting 'the commons multiple.' In thinking about the commons (singular) in its multiplicities (many), the interactions along the urban extensions—satellite town, wetland, and dumping ground—push us towards writing the ever-expanding city beyond the idea of either ecological commons or human commoners, to instead think about other socio-material commons and commoning practices that emerge either from former habits, the reproduction of everyday practices, or from the need to survive within urbanising and eviscerating landscapes. Moreover, the heterogeneities that emerge amidst the fluid materialities of the urban extensions help reconfigure the commoning-community as an assemblage, thus forging a dialogue between urban theory and more-than-human geography.

Thinking further along the lines of eviscerating urbanisms and toxic geographies prevalent in the peripheries and extensions of cities, Chapter 7 entitled 'The Urban Sensorium: Spatial Politics and the Olfactive Logic of the City' in correspondence with the third research question demonstrates how urban planning seeks to distribute the sensorial in cultivating an urban sensorium based on olfaction. While there is a tendency to lay emphasis on visual codes and aesthetics in spatial planning and zoning practices, there are other sensorial dimensions at play, relegating not only who or what constitutes the urban, but the how (form) and where (place) of it as well. In the planned imagination of the capital city, those entities, beings, things, infrastructures, and practices deemed 'non-urban' encompassing a mix of rural and agrarian, nuisance-causing, polluting, hazardous, and noxious entities are relegated outside the urban form, towards the outskirts of the city. This spatial-sensorial order is delineated by a caste-state nexus operating on the Brahmanical ideology of purity and pollution (Lee, 2017), which

permeates through municipal bodies, planning documents, land regimes, built environments, housing, public infrastructures, and everyday practices. As a significant marker of caste then, smells emanating from non-Brahmanical livelihoods, bodies, and infrastructures, particularly those associated with (certain) animals, with meat, slaughter, poultry and fish markets, and urban detritus are relegated to the urban margins, thereby producing uneven geographies in the city.

Occurring by design, such spatial planning and segregation while maintaining the urban core and intermediaries as olfactorily neutral, cultivate an impoverished sensorium along the extensions, producing urban smellscapes and reproducing cities that are fractal (Bharathi et al., 2021). In other words, the distribution of the sensible (Rancière, 2004) or rather of the sensorial, as evidenced by the structure and layout of cities, in addition to the emplacement of public infrastructures and amenities constitute the parts in the composition of the urban whole and therein the urban sensorium at large. Within this, the lived realities of urban inhabitants, both human and other-than-human, in fractal geographies determined by Brahmanism, is further striated along gender, religion, and class lines affecting access, producing inequality, and a hierarchy of space. The more-than-human propels us towards a distinct iteration of the politics of aesthetics in the urban form.

The multiple dots, knots, lines, threads, and cuts summarised above, entangle and interweave into a meshwork, "the trails along which life is lived" (Ingold, 2007, p. 21). The urban meshwork then, as "an ecology of life" (p. 103) is continuously woven by human and other-than-human entities and networks. Such weaving is also 'archi-textural' (Lefebvre, 1991), in that it is in relation to the surrounding environs that the meshwork becomes—thus, constituting The Cultivated City.

Of Multitudes and Multiplicities

"*Since we live among actual multiplicities (and are ourselves multiplicities), we are always elements and actors within the world.*" (Roffe, 2010, p. 182)

Multiplicity originates from the coming together, the twisting, enfolding, cuts, and crossings of lines/elements/actors. These elements do not come together as parts to formulate the whole. They also cannot be considered as fragments or varied "expressions of a single concept" (Roffe, 2010, p. 181). Taking the 'multiple' as a substantive rather than as an adjective or predicate, 'multiplicity' for French philosopher Gilles Deleuze defies the dyad of

the ‘one’ and ‘many,’ asking questions not about the ‘what’ of things, but in ‘how’ they come to be, through enactments and intra-actions—as multiplicities.

A multiplicity then, is not bounded. It is porous. It is always in flux. That means, when one line or element within the multiplicity changes or alters, it brings about “a total change in its nature – a change in its intensive state” (Roffe, 2010, p. 181). Thus, although multiplicity can maintain some amount of ‘consistency’ for a certain period of time (Tampio, 2010), it is not only affected by cross-cuttings, but also gets re-worked, re-shaped, and re-determined by ongoing intra-activities (Barad, 2007). A multiplicity, therein, is never finished and never unfinished. It is always in the making, in the becoming, not by ‘things,’ but by heterogeneous entities, practices, tendencies, and processes.

Thinking along these lines, the Cultivated City—threaded by (i) *a retinue of entities*: bovines, dairy farmers, waste workers, butchers, veterinary department officials, infrastructures, informal networks, waste matter; (ii) across *the urban gradient*: urban core, intermediaries, urban extensions, peripheries (iii) amidst *varied spatial forms and spaces*: urban village, hill settlements, waste landscape, housing colony, hostel grounds, city streets; (iv) engaging in *a multitude of practices*: walking, rearing, milking, feeding, foraging, seizing, banning, slaughtering; and (v) constructing *distinct attributes*: improvement, (im)mobilities, rhythms, commons, agrarian urbanisms, smellscapes, sensorium—is forged by its multiplicities.

The cultivated city is composed not as a single entity, but *by* the multiple practices of its enaction. Due to the fluid and co-constructed nature of entities/elements within a multiplicity, they *become* through ‘partial connections’ (Haraway 1991; Strathern 1991). What this means is that entities are not wholes or parts, but are both. They are not fragments or fragmented, but are “singular and multiple, one and many…. Both/and” in the same moment (Law, 2002, p.4). Therefore, as one reality is enacted through partial connections, so is another in parallel (see Carolan, 2004), suggesting that ‘the body (singular) is multiple (many; Mol, 2002).

The cultivated city tracks the material-semiotic trace of bovines across the archival, the ethnographic, the sensorial, and the comparative. It tells us about the significance of the bovine in Indian society. It captures how the bovine entity, who in their textual, symbolic, material, lively, and political capacities thread together a multitude of heterogeneities. It simultaneously also signals the distinct, complex, and contradictory position the cow holds, leading to the notion of the ‘cow conundrum.’ The cultivated city takes us to the ‘fleshy text’ of bovines in the state archive from the late 19th century onwards. It tells us how distinctly

the bovine is perceived and improved upon across landscapes. It narrates its embeddedness in sanitary and cattle improvement measures, across urban and rural improvement regimes respectively. Additionally, how the bovine body and ecologies are enrolled in urban planning imaginaries, if at all, is also revealed. The cultivated city, therein, composes an alternative genealogy of the city.

It also takes us to the urban villages of Delhi and the urban extensions of Guwahati, where dairy farming practices abound, each foregrounding distinct histories and geographies. The cultivated city illustrates the persistence of traditional caste-based livelihood activities in the urban, cross-cutting gendered relations, religious identity, questions of migration and modes of urban survival. In parallel, it is *cut* by the precarious nature of other-than-human and human lives. On the one hand, are forms of toxic-metabolic harm through the ingestion of plastic, the injecting of oxytocin, the abandoning of male calves and unproductive cows, and on the other, are humans who are treated as disposable beings within capitalist urbanisation processes. In so doing, it sheds critical light on what it means to be rural, agrarian, animal, or other (striated along gender, caste, religion, and caste lines) in the urban, thus contributing to the discourse on agrarian urbanisms in South Asia.

The cultivated city narrates how bovines common the city. It produces different formulations of more-than-human commoning across cities. It attends to the feeding practices of Hindus, the care practices of women, as well as to the complaints raised by middle-class (Hindu) residents. It keenly observes the repetitive nature of bovines' mobilities, with difference. Taking us to open fields, roadside garbage dumps, government housing colony, a barren ground, hostel ground, to the gardens of residential homes, a forest in the middle of the city, to footpaths and traffic-signal islands, to cattle pounds and gaushalas, and the slaughter house. In the urban peripheries, the cultivated city propels us towards alternative ways of sensing the urban. It has the potential to capture the banalities of everyday life, fleeting moments, and events that change the course of city life beyond the visual paradigm. It both questions and unearths the underlying logic that pervades the spatial planning of cities. And simultaneously pushes the discourse on the role of caste and Brahmanical ideology in the emplacement of other-than-human geographies through smells.

Composed by varied movements, tensions, reciprocities, correspondences, and ruptures, of enactments between bovines and varied entities in the surrounding environs, the cultivated city unearths "the way in which problems are framed, bodies are shaped, and lives [both human and nonhuman] are pushed and pulled into one shape or another" (Mol, 2002, p. viii). Mol characterises this as an ontological politics. Rhythmic in nature, at times the

multiplicities produced are cyclical and repetitive (with difference), whereas, at other times due to the fleshy and lively nature of a multiplicity it can also cause discordance, producing arrhythmia. Not only are our realities multiple and polyrhythmic then, they are also 'political' due to the hierarchies and asymmetries inherent in urban naturecultures; illustrating how the 'real' and the 'political' are enmeshed in each other. Thus, it becomes critical to trace, keep track of, and pay attention to how rhythms are produced, how changes occur, what enables these shifts, and how ruptures are formed as the multiplicity is enacted and intra-acted. Ontological politics, then, needs to be situated by attending to rhythmic and situated multiplicities, thus, revealing how the cultivated city is constructed in the everyday. In urging us to read, follow, smell, compare, and write the city, the cultivated city illustrates how the urban is a more-than-human endeavour, thus producing *the city multiple.*

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